Dr. KAYLA A. KAISER Curriculum Vitae Nov 2023

HIGHLIGHTS

- I use data to make decisions and I share data with colleagues.
- I have significantly improved student success through iteration and professional development.
- I care about students. I am invested in my department and CSUN as an institution.

EDUCATION

- Ph.D., Analytical Chemistry University of California, Riverside March 2012
- M.S. Chemistry Arizona State University May 2005
- B.S. Chemistry University of Nebraska at Kearney May 2002

PROFESSIONAL EXPERIENCE

Lecturer, 05/2013 - Present
California State University Northridge - Northridge, CA
I have been solely in charge of the full gamut of classroom aspects and administrative work of various introductory and general chemistry courses and their corresponding laboratories. I have also instructed various analytical, organic, physical and instrumental laboratories. I have redesigned the graduate chemistry practicum course. I served as advisor to the CSUN Chem Club for 6 years.

Visiting assistant professor, 05/2011 - 05/2013
W. M. Keck Science Department of Pitzer, Scripps, Claremont McKenna Colleges - Claremont, CA
In addition to my teaching responsibilities, I supervised a research group of 4 undergraduates. The department awarded us two summer research stipends to cover the cost of our materials (**$1,253** for Summer 2013 and **$386** for Summer 2012). We mined publicly-available data for genes responsible for circadian regulation and metabolism in the model plant *Arabidopsis thaliana*. We used NMR and GC-MS for metabolic profiling of wild-type and clockless mutants grown to 7-day old seedlings in our lab. We uncovered metabolic genes previously not associated with circadian clock regulation.

NSF-IGERT fellow, 08/2006 - 03/2012
University of California, Riverside - Riverside, CA
The National Science Foundation's Integrative Graduate Education and Research Traineeship (IGERT) program funds graduate students working on interdisciplinary projects. The trainee is responsible for interfacing between two or more research advisors in different departments, our program at UCR was between chemistry, computer science and botany. The allowance for IGERT fellows is **$10,500 annually**. I kept track of all my expenditures and created annual reports. These funds were spent on computer hardware, software, laboratory supplies, chemicals and travel to academic conferences and a summer internship.

PROFESSIONAL EXPERIENCE (continued)

Adjunct Faculty, 08/2014 - 08/2016
Pasadena City College - Pasadena, CA
Instructor for General, Organic and Biochemistry (CHEM 2A) lecture and laboratory. Instructor for Introductory Chemistry (CHEM 22) lecture and laboratory.

Teaching Assistant, 09/2010 - 06/2011
University of California - Riverside, CA
Instructor for General Chemistry (CHEM 001B) Discussion. Instructor for Instrumental Methods (CHEM 125L) laboratory.

Adjunct Faculty, 5/2005 – 05/2006
Maricopa County Community College District - Phoenix, AZ
Instructor for Findamental Chemistry (CHEM 130) lecture and laboratory at Estrella Mountain, Scottsdale, and South Mountain Community Colleges.

Teaching Assistant, 09/2002 – 05/2005
Arizona State University - Tempe, AZ
Instructor for General Chemistry (CHEM 113) laboratory, General Chemistry with Qualitative Analysis (CHEM 115) laboratory, and Instrumental Analysis (CHEM 328) laboratory. Responsible for designing a new experiment for the curriculum about cyclic voltammetry.

Teaching Assistant, 01/2002 – 05/2002
University of Nebraska - Kearney, NE
Instructor for Techniques of Chemical Analysis (CHEM 301) laboratory. Solely responsible for maintaining the gas chromatograph with mass spectrometry detection (GC-MS) instrument.

Laboratory Technician, 10/2001 – 01/2002
Ward Laboratories, Kearney, NE
Sampled and conducted analyses of soil / water for nitrate, sulfate, pH, conductivity, coliform, E. coli. Troubleshot instruments: autosampler/peristaltic pump/colorimetric detector, pH/conductivity meter. Offered permanent full-time position upon graduation with Bachelor's degree.

EXTERNAL COLLABORATIONS

University of Illinois Urbana-Champaign, PI: C.K. "Tina" Gunsalus Champaign, IL (Fall 2022)
- Facilitated https://labsthatwork.web.illinois.edu/labs-that-work-for-everyone/ in CHEM 500

Massachusetts Institute of Technology, PI: Katherine Drennan Cambridge, MA (Spring 2014)
- Implemented http://chemvideos.mit.edu/ in General Chemistry I to pique interest in STEM

AWARDS

ACS Student Chapter Advisor (2013-2019)

- Commendable (2018-2019) Allocated **$800** from Associated Students (AS)
- Honorable mention, Green Chemistry (2017-2018) Allocated **$1150** in funding from AS
- Honorable mention (2016-2017) Received **$2450** in funding from AS
- CSUN Matador Involvement Center – Outstanding Organization for 2016 – 2017
- CSUN Matador Involvement Center – Creative Marketing Award for 2016 – 2017

Society for Laboratory Automation & Screening, 2011 Tony B. Academic Travel Award 2011
University of California Riverside, **Outstanding Teaching Assistant** 2009 – 2010
Arizona State University, Department of Chemistry & Biochemistry, Scholarship 2002 – 2003
American Chemical Society, Agrochemicals Division, Young Scientist Award 2002
UNK Student Research Day, 2nd Place Poster in Natural and Social Sciences 2002
National Science Foundation, Texas A&M University, Research Experience for Undergraduates 2001
University of Nebraska at Kearney, **Analytical Division, Outstanding Undergraduate Student** 2001
UNK, Board of Regents Scholarship, Honors Program Participant 1998 – 2002
National Residence Hall Honorary, recognizes the top 1% of residence hall leaders 1999 – 2002
American Chemical Society, Commendable Student Affiliate Chapter 1998 – 2000
University of Nebraska at Kearney, Dean's List 1998 – 1999
Omaha North High School, Alumni Foundation Scholarship 1998 – 1999

PUBLICATIONS

Mustroph, A.; Barding, G.; Kaiser, K.; Larive, C. K.; Bailey-Serres, J. "Characterization of distinct root and shoot responses to low-oxygen stress in *Arabidopsis* with a focus on primary C- and N-metabolism" Plant Cell & Environment. Volume 37, Number 10, Pages 2366-2380, **2014**.

Kaiser, K. A. "Metabolic profiling of primary and secondary biosynthetic pathways in angiosperms: comparative metabonomics and applications of hyphenated LC-NMR and LC-MS" University of California, Riverside Ph. D. Dissertation. **2012**.

Kim, J. D.; Kaiser, K. A.; Larive, C. K.; Borkovich, K. "Use of 1H NMR to measure intracellular metabolite levels during growth and asexual sporulation in *Neurospora crassa*" Eukaryotic Cell. Volume 10, Number 6, Pages 820-831, **2011**.

Kaiser, K. A.; Barding, G. A.; Larive, C. K. "Metabolic profiling of plants by 1H-NMR: A comparison of metabolite extraction strategies using rosette leaves of the model plant *Arabidopsis thaliana*" Magnetic Resonance in Chemistry. Volume 47 Issue S1, Pages S147-S156, **2009**.

Branco-Price C.; Kaiser K. A.; Jang C. J. H.; Larive C. K.; Bailey-Serres J. "Selective mRNA translation coordinates energetic and metabolic adjustments to hypoxia and reoxygenation in *Arabidopsis thaliana*" The Plant Journal, Volume 56, Pages 743–755, **2008**.

Kaiser K. A.; Merrywell C. E.; Fang F.; Larive C. K. "Metabolic Profiling" in Quantitative NMR Spectroscopy in Drug Analysis U.Holzgrabe, Ed. Pages 233-267, **2008**.

Hamersky, K. A. "Fiber optic surface plasmon resonance biosensor for cutaneous wound characterization" Arizona State University Master's Thesis. **2005**.

Hamersky, K. A.; Aga, D. S. "Quantification of Volatile Organic Compounds in Soil-vapor Extractor Headspace by Solid Phase Microextraction and Gas Chromatography/Mass Spectrometry" University of Nebraska at Kearney Undergraduate Research Journal. Morris Press, Kearney, **2001**.

PRESENTATIONS

25th Biennial Conference on Chemistry Education (BCCE), University of Notre Dame – Oral 2018
American Chemical Society (ACS), 255th National Meeting, New Orleans, LA – Poster 2018
American Chemical Society (ACS), 253rd National Meeting, San Francisco, CA – Poster 2017
Forty-fifth ACS Western Regional Meeting, San Marcos, CA – Poster 2015
Forty-fourth ACS Western Regional Meeting, Santa Clara, CA – Poster 2013
Keck Summer Research Symposium – Poster 2013
Keck Summer "Brown Bag" Lunch Symposium Series – Oral 2013
ACS Southern California Undergraduate Research Conference, Claremont, CA – Poster 2013
**** Meeting co-chair**
Fifty-fourth Experimental NMR Conference (ENC), Asilomar, CA – Poster 2013
Keck Summer Research Symposium – Poster 2012
Keck Summer "Brown Bag" Lunch Symposium Series – Oral 2012
5C Women in Science, "Grad School Panel," Claremont, CA – Oral 2012
UCR Undergraduate Research Symposium, Riverside, CA – Poster 2011
ACS, 241st National Meeting, Anaheim, CA – Oral 2011
Western States American Society of Plant Biologists (ASPB), Long Beach, CA – Oral & Poster 2011
Society for Lab Automation and Screening (SLAS) Meeting, Palm Springs, CA – Oral & Poster 2011
Southwest Analytical Professors (SWAP), Riverside, CA – Oral 2011
University Teaching Certificate, Riverside, CA – Oral 2011 **** Invited Guest Teacher**
Sixth Annual ChemGen IGERT Retreat, Riverside, CA – Oral 2010
Max-Planck-Institute for Chemical Ecology, Saalfeld, Germany – Oral 2010
International Society for Plant Anaerobiosis (ISPA), Volterra, Italy – Poster 2010
Fifty-first Experimental NMR Conference (ENC), Daytona Beach, FL – Poster 2010
Fifth Annual ChemGen IGERT Retreat, Lake Arrowhead, CA – Oral 2009
UCR Graduate Student Association "Building Bridges Across Disciplines" Riverside, CA – Oral 2009
Fiftieth Experimental NMR Conference (ENC), Pacific Grove, CA – Poster 2009
Fourth Annual ChemGen IGERT Retreat, Lake Arrowhead, CA – Oral 2008
NSF Integrative Graduate Education Research Trainee (IGERT) Project Meeting, Arlington, VA – Poster 2008
Third Annual ChemGen IGERT Retreat, Warner Springs, CA – Oral 2007
Small Molecule NMR Conference (SMASH), Chamonix, France – Poster 2007
American Chemical Society (ACS), 234th National Meeting, Boston, MA – Poster 2007
Second Annual ChemGen IGERT Retreat, Lake Arrowhead, CA – Oral 2006
Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) Ft. Lauderdale, FL – 2002
Nebraska Academy of Sciences (NAS) Lincoln, NE – Oral 2002
ACS 223rd National Meeting, Orlando, FL – Oral 2002
ACS Midwest Regional Meeting, Lincoln, NE – Oral & Poster 2001 **** Co-organizer of Undergraduate Programming**
Nebraska Academy of Sciences (NAS), Statewide Meeting, Lincoln, NE – Oral 2001
American Chemical Society (ACS), 221st National Meeting, San Diego, CA – 2 Posters 2001
American Chemical Society (ACS), Midwest Regional Meeting, St. Louis, MO – Poster 2000

PROFESSIONAL DEVELOPMENT

"Million Dollar Showcase: Affordable Learning in Action" on October 23, 2019. ****awardee**
“eLearning and Academic Innovation Showcase” on May 10, 2018. ****panelist**
“Active Learning Workshop” with CSUN Active Learning Ambassadors on December 7, 2018.
“Equity-Minded Syllabus” Faculty Learning Community at CSUN is met six times during Fall 2018.
“NanoWRM” one-day ACS Western Regional Meeting in Pasadena, CA on October 27, 2018.
“Active Learning Workshop” with CSUN Active Learning Ambassadors on October 12, 2018.
“Learning-Centered Teaching” with Dr. Stephen Brookfield at CSUN on May 8, 2018. Keynote
“Latinx Identity in the University Classroom” with Dr. Vasti Torres at CSUN on April 2, 2018.
“Institute for Transformative Teaching and Learning (ITTL)” at CSUN held two retreats and two cohorts met six times each during the Spring 2018 semester. I was hired as a ****Faculty Development Fellow** to oversee the Canvas site.
“eLearning Institute” at CSUN on July 17-21, 2017 and met three times each during Fall 2017 and Spring 2018.
“Growth Mindset Video Committee” at CSUN on November 27, 2017.
“Opportunity Gaps in our Classrooms” Town Hall at CSUN on October 13, 2017. ****panelist**
“Black Minds Matter” Massive Open Online Course at CSUN in Fall 2017.
“Creating Equitable Learning Environments through Growth Mindset and Disciplinary Apprenticeships” California Community Colleges Success Network (3CSN) at CSUN on September 8-9, 2017.
“Inclusive Innovation Retreat” at CSUN on January 10-11, 2017.
“Metacognition: Teach Students How to Learn” with Dr. Saundra McGuire at CSUN on Thursday, December 15, 2016.
“ALEKS Chemistry Symposium” at the ALEKS headquarters in Irvine, CA on November 4-5, 2016.
“Syllabus-a-thon” at CSUN on August 18, 2016.
“We-Inspire Training in the [Technology Enhanced Active Learning] TEAL room” at CSUN on July 28, 2016.
“Educator’s Day” at the 45th ACS Western Regional Meeting in San Marcos, CA on November 7, 2015.
“Promoting Academic Honesty” at CSUN on October 8, 2015.
Attended 248th ACS National Meeting for training in “Communicating Science to the Public” 2014
"How to get Students to Read" at CSUN on October 30, 2013.
“Education in Chemistry: The Two Year College as a Legitimate Pathway for Underrepresented Minorities Pursuing Careers in STEM Areas” at the 44th ACS Western Regional Meeting in Santa Clara, CA on October 4, 2013.

UNIVERSITY SERVICE

Faculty Foundations Committee, co-design and execute events for new faculty (Mar 2021 - Jan 2022)